



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2023-0421; Project Identifier MCAI-2022-01360-A; Amendment 39-22435; AD 2023-09-12]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Pilatus Aircraft Ltd. Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain Pilatus Aircraft Ltd. (Pilatus) Model PC-12, PC-12/45, PC-12/47, and PC-12/47E airplanes. This AD is prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI identifies the unsafe condition as insufficient grounding of the vapor cycle cooling system (VCCS) compressor/condenser. This AD requires inspecting the power return and chassis grounding cable attachment points at frame 37, including the attachment parts, and depending on the inspection results, corrective action. This AD also requires modifying the installation of the VCCS compressor/condenser power return cables and installing an additional isolated VCCS chassis ground cable. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:**

*AD Docket:* You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No.FAA-2023-0421; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the MCAI, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

*Material Incorporated by Reference:*

- For service information identified in this final rule, contact Pilatus Aircraft Ltd., Customer Support General Aviation, CH-6371 Stans, Switzerland; phone: +41 848 24 7 365; email: [techsupport.ch@pilatus-aircraft.com](mailto:techsupport.ch@pilatus-aircraft.com); website: [pilatus-aircraft.com](https://www.pilatus-aircraft.com).

- You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-0421.

**FOR FURTHER INFORMATION CONTACT:** Doug Rudolph, Aviation Safety Engineer, International Validation Branch, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (816) 329-4059; email: [doug.rudolph@faa.gov](mailto:doug.rudolph@faa.gov).

**SUPPLEMENTARY INFORMATION:**

**Background**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain serial-numbered Pilatus Model PC-12,

PC-12/45, PC-12/47, and PC-12/47E airplanes. The NPRM published in the *Federal Register* on February 27, 2023 (88 FR 12273). The NPRM was prompted by AD 2022-0212, dated October 18, 2022 (referred to after this as “the MCAI”), issued by the European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union.

The MCAI was prompted by a reported occurrence of a burning odor coming from the air conditioning vents during the climb phase of a Pilatus Model PC-12/47E airplane. An investigation identified that insufficient grounding of the VCCS compressor/condenser at frame 37 resulted in severe heat damage to the baseplate and adjacent metal support structure. It was determined that this condition may occur on airplanes equipped in production with the large oxygen bottle installed on the right-hand side of the rear fuselage. To address the unsafe condition, the MCAI requires a one-time inspection of the power return and chassis grounding cable attachment point at frame 37, including the attachment parts, and modification of the installation of the VCCS.

In the NPRM, the FAA proposed to require a one-time inspection of the power return and chassis grounding cable attachment point at frame 37, including the attachment parts, and modification of the installation of the VCCS. This condition, if not addressed, could, in the case of damage to the oxygen supply line, lead to an uncontrolled fire with damage to the airplane and injury to the occupants. The FAA is issuing this AD to address the unsafe condition on these products.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-0421.

## **Discussion of Final Airworthiness Directive**

### **Comments**

The FAA received a comment from the Air Line Pilots Association, International (ALPA), who supported the NPRM without change. In addition, an individual commenter

submitted a comment to the docket, but did not comment on the proposed required actions or the determination of the costs in the NPRM.

## **Conclusion**

These products have been approved by the aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered the comment received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, this AD is adopted as proposed in the NPRM.

## **Related Service Information under 1 CFR Part 51**

The FAA reviewed Pilatus PC-12 Service Bulletin 21-016, dated August 15, 2022, which specifies procedures for inspecting the power return and chassis grounding cable attachment point on the airframe at frame 37, including the attachment parts, modifying the installation of the VCCS compressor/condenser power return cables, and installing an additional isolated VCCS chassis ground cable. This service bulletin also specifies contacting Pilatus if any damage is found.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

## **Differences Between this AD and the MCAI**

The MCAI requires contacting the manufacturer for approved corrective action instructions if any discrepancy is found during the inspection. This AD requires contacting either the Manager, International Validation Branch, FAA; EASA; or Pilatus's

EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

### **Costs of Compliance**

The FAA estimates that this AD affects 8 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

#### **Estimated costs**

<b>Action</b>	<b>Labor Cost</b>	<b>Parts Cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Inspect	3 work-hours x \$85 per hour = \$255	Not Applicable	\$255	\$2,040
Modify	5 work-hours x \$85 per hour = \$425	\$667	\$1,092	\$8,736

The repair instructions that may be needed as a result of the inspection could vary significantly from airplane to airplane. The FAA has no data to determine the costs to accomplish the repair or the number of airplanes that would need this repair.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**2023-09-12 Pilatus Aircraft Ltd.:** Amendment 39-22435; Docket No. FAA-2023-0421; Project Identifier MCAI-2022-01360-A.

**(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Pilatus Aircraft Ltd. Model PC-12, PC-12/45, PC-12/47, and PC-12/47E airplanes, serial numbers 466, 467, 725, 861, 1032, 1052, 1082, 1115, 1232, 1411, 1428, 1439, 1530, 1541, 1663, 1725, and 1802, certificated in any category.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 2197, Air Conditioning System Wiring.

**(e) Unsafe Condition**

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI identifies the unsafe condition as insufficient grounding of the vapor cycle cooling system (VCCS) compressor/condenser. The FAA is issuing this AD to address this condition. The unsafe condition, if not addressed, could, in the case of damage to the oxygen supply line, lead to an uncontrolled fire with damage to the airplane, and injury to the occupants.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions**

(1) Within 2 months after the effective date of this AD, inspect the power return and chassis grounding cable attachment points at frame 37, including the attachment parts, for physical and heat damage, de-lamination, and corrosion in accordance with

steps (2) through (6) of Section 3.B. of the Accomplishment Instructions in Pilatus PC-12 Service Bulletin 21-016, dated August 15, 2022 (Pilatus PC-12 SB 21-016).

(2) If, during the inspection required by paragraph (g)(1) of this AD, any physical or heat damage, de-lamination, or corrosion as identified in steps (2) through (6) of Section 3.B. of the Accomplishment Instructions in Pilatus PC-12 SB 21-016 is detected, before further flight, repair using a method approved by the Manager, International Validation Branch, FAA; the European Union Aviation Safety Agency (EASA); or Pilatus's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(3) Within 2 months after the effective date of this AD, modify the installation of the VCCS compressor/condenser power return cables and install an additional isolated VCCS chassis ground cable in accordance with Section 3.C. of the Accomplishment Instructions in Pilatus PC-12 SB 21-016. Where the service bulletin specifies discarding the stop angle, this AD requires removing the stop angle from service.

**(h) Alternative Methods of Compliance (AMOCs)**

The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in § 39.19. In accordance with § 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, mail it to the address identified in paragraph (i)(2) of this AD or email to: 9-AVS-AIR-730-AMOC@faa.gov. If mailing information, also submit information by email. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.



**(i) Additional Information**

(1) Refer to EASA AD 2022-0212, dated October 18, 2022, for related information. This EASA AD may be found in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-0421.

(2) For more information about this AD, contact Doug Rudolph, Aviation Safety Engineer, International Validation Branch, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (816) 329-4059; email: [doug.rudolph@faa.gov](mailto:doug.rudolph@faa.gov).

**(j) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Pilatus PC-12 Service Bulletin 21-016, dated August 15, 2022.

(ii) [Reserved]

(3) For service information identified in this AD, contact Pilatus Aircraft Ltd., Customer Support General Aviation, CH-6371 Stans, Switzerland; phone: +41 848 24 7 365; email: [techsupport.ch@pilatus-aircraft.com](mailto:techsupport.ch@pilatus-aircraft.com); website: [pilatus-aircraft.com](https://www.pilatus-aircraft.com).

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to: [www.archives.gov/federal-register/cfr/ibr-locations.html](https://www.archives.gov/federal-register/cfr/ibr-locations.html).

Issued on May 9, 2023.

Michael Linegang, Acting Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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